



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,095	07/20/2005	Jeremy Bowman	09294-020US1	3292
26161	7590	08/19/2009	EXAMINER	
FISH & RICHARDSON PC			WOOD, ELLEN S	
P.O. BOX 1022			ART UNIT	PAPER NUMBER
MINNEAPOLIS, MN 55440-1022			1794	
NOTIFICATION DATE		DELIVERY MODE		
08/19/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

[PATDOCTC@fr.com](mailto:PATDOCTC@fr.com)

<b>Office Action Summary</b>	<b>Application No.</b> 10/525,095	<b>Applicant(s)</b> BOWMAN, JEREMY
	<b>Examiner</b> ELLEN S. WOOD	<b>Art Unit</b> 1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 22 June 2009.

2a) This action is FINAL.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1,3,4,7,8,12-15,19-21,23,24,26 and 28 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1, 3-4, 7-8, 12-15, 19-21, 23-24, 26 and 28 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_

#### **DETAILED ACTION**

1. Applicant's arguments, filed 06/22/2009, with respect to claims 1, 3-4, 7-8, 12-15, 19-21, 23, 24, 26 and 28 have been fully considered and are persuasive. The rejection of claims 1, 3-4, 7-8, 12-15, 19-21, 23, 24, 26 and 28 under 35 U.S.C 103(a) as being unpatentable over Jarvenkyla et al. (US 5,759, 461) in view of Toyosumi et al. (US 6,565,938) or Katz et al. (US 6,127,662) has been withdrawn.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3-4, 7-8, 12-15, 19-21, 23-24, 26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jarvenkyla et al. (US 5,759, 461, hereinafter "Jarvenkyla") in view of Flick (*Plastics Additives - An Industrial Guide (2<sup>nd</sup> Edition)*).

Jarvenkyla discloses a multi-layer plastic pipe (col. 1 line 7). The multi-layer plastic pipe has a surface layer that provides a protective layer around a pipe (col. 2 lines 19-22). The protective outer layer is made to easily detach from the core pipe by simple means, either wholly or only at the joint surfaces, such as the pipe ends (col. 2 lines 26-29). The outer layer may also have an adhesion enhancing or inhibiting agent mixed in with the material depending on the use and the materials selected for the outer layer and core pipe (col. 3 line 49-55). The protective outer layer can be made from

polypropylene mixed with a wax and the core pipe is made from polyethylene (col. 3 lines 63-65). It is known to one of ordinary skill in the art that wax is an ester of fatty acids. The pipe formed is stiffer, stronger, and is protected against scratching (col. 1 lines 43-46).

When a single layer pipe is formed, often fillers must be mixed with the plastic material which reduces the mechanical properties and weldability of the pipe (col. 1 lines 51-55). In a two-layer pipe according the present invention, the properties of the core pipe or conducting pipe are optimized for the conduction of fluids, and the outer layer is designed to resist any external conditions and stress (col. 1 lines 55-59).

The core pipe is coated with a surface layer by coextrusion (col. 2 lines 19-20). Co-extrusion dies were used to form the plastic pipes (col. 2 lines 22-25). The surface of the outer layer is moderately hard, whereby it has a low adhesion, and the structure of the layer is moderately stiff, whereby the outer layer can be detached from the pipe (col. 2 lines 31-36), thus the outer layer prevents undesired movement between the skin layer and the core, but the layer can still be removed and provide impact strength of the inner layer.

Jarvenkyla is silent with the adhesion reducing additive, the amount of reducing additive used and the characteristics of the pipes.

Flick discloses in Section XXIV – Waxes that glycerol monostearate is widely used in polyolefins as a lubricant, anti-static and anti-fogging agent (waxes 927). A lubricant is defined to one of ordinary skill in the art as a agent that reduces the attraction (adhesion or cohesion) of the polymer. Glycerol monostearate is a wax.

Thus, it would be obvious to one of ordinary skill in the art to combine glycerol monostearate as the wax component in the polypropylene outer layer of Jarvenkyla, because the addition of glycerol monostearate would aid in reducing the adhesion of the outer removable skin layer to the inner core layer of the plastic pipe.

It would be obvious to one of ordinary skill in the art that the amount of adhesion-reducing additive in the skin layer would be discovered by routine experimentation. The amount added to the skin would provide a composition that is optimal when the intended use of the resin composition is for protection and removable qualities when applied to a pipe. The mechanical characteristics of the layer would be dependent on the intended use of the skin layer, such as in a pipe the mechanical strength of the skin layer would need to be increased. The adhesive bond between the skin layer and the inner core layer of 0.2 N/mm to 2.0 N/mm would be discovered by routine experimentation of the amount of the adhesive component added to the composition to discover optimal conditions for a pipe as to not cause premature unwanted peeling of the skin layer, but still allow the outer skin layer to be detached when appropriate.

#### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1, 3-4, 7-8, 12-15, 19-21, 23-24, 26 and 28 have been considered but are moot in view of the new ground(s) of rejection.
5. The applicant argues that in the absence of any guide as to the quantities that might represent a reasonable and proper starting point for experimentation, it is

Art Unit: 1794

unreasonable to suggest that the relative amounts of adhesion reducing additive could be discovered by routine experimentation.

In response, it is known to one of ordinary skill in the art that esters of polyhydric alcohols are used in polyolefins materials as lubricants. Lubricants reduce the adhesion properties of the material. Thus, one of ordinary skill in the art could look to the prior art to have a guide to the quantities that might represent a reasonable and proper starting point for experimentation. Also, it should be noted that adhesion reducing additives are result effective variables. Absent unexpected results, it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the adhesion reducing additive since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

6. The applicant argues that Toyosumi is not analogous art.

In response, Toyosumi has been removed as a prior art reference. Flick has been referenced as a secondary reference in combination with the primary reference, Jarvenkyla. The examiner notes, that while Flick does not disclose all the features of the present claimed invention, Flick is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, esters of polyhydric alcohols are used as adhesion reducing

Art Unit: 1794

additives in polyolefin resins, in order to (motivation) and in combination with the primary reference, discloses the presently claimed invention.

7. Claims 2, 5-6, 9-11, 16-18, 22, 25, and 27 have been canceled.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLEN S. WOOD whose telephone number is (571)270-3450. The examiner can normally be reached on M-F 730-5 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rena L. Dye/  
Supervisory Patent Examiner, Art Unit 1794